

FIG. 1

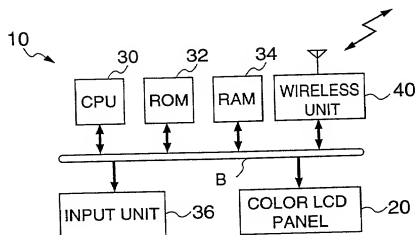


FIG. 2

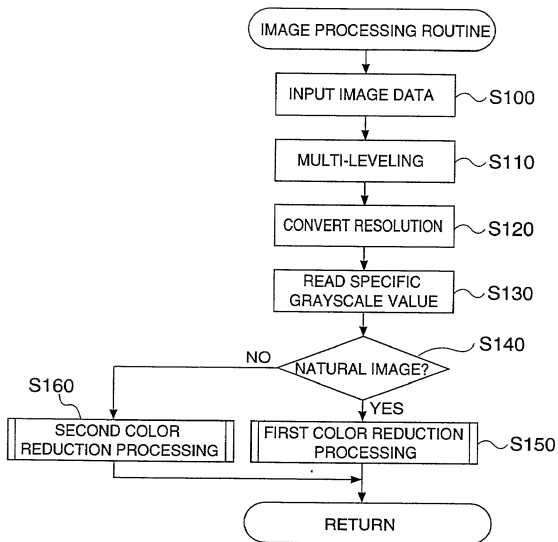


FIG. 3

PALETTE INDEX COLOR	( R , G , B )
0	( 255 , 255 , 255 )
1	( 232 , 100 , 140 )
2	( 221 , 255 , 30 )
3	( 180 , 75 , 0 )
⋮	⋮
252	( 0 , 97 , 156 )
253	( 0 , 30 , 170 )
254	( 0 , 0 , 85 )
255	( 0 , 0 , 0 )

FIG. 4

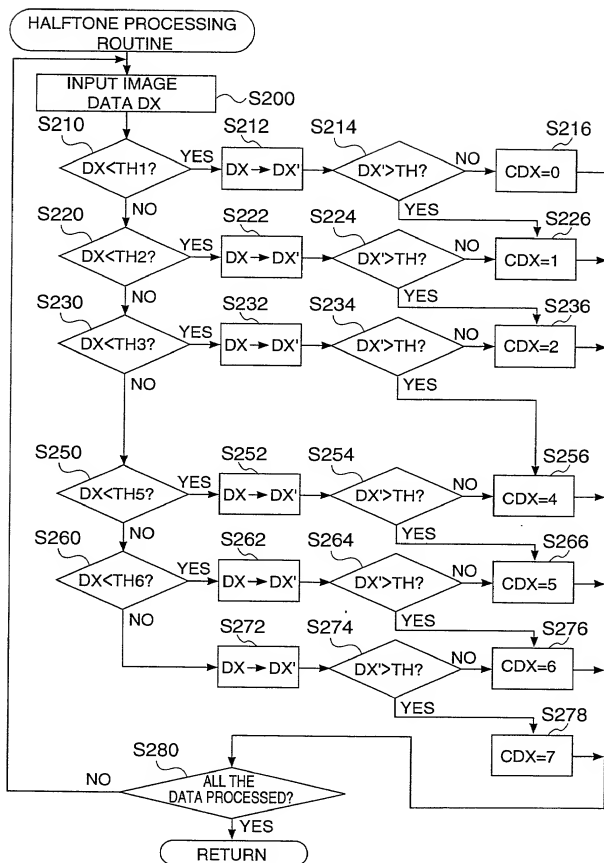


FIG. 5

FIG. 7

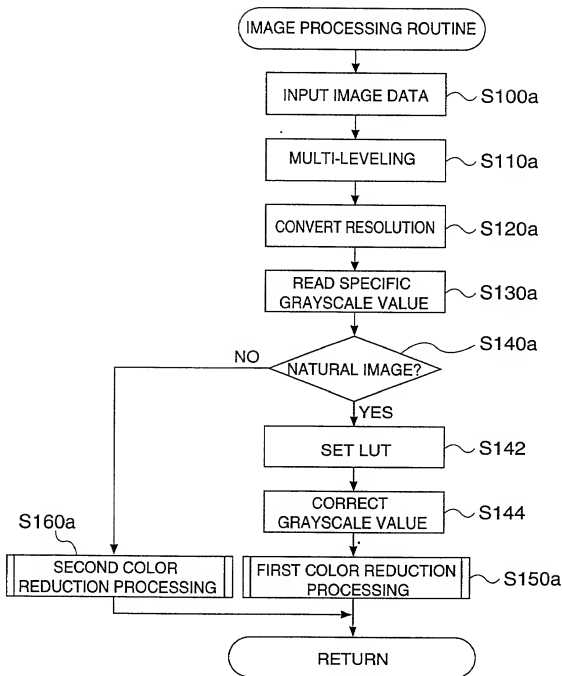


FIG. 8

R LUT

DXR	DXr
0	0
• • •	• • •
104	96
• • •	• • •
120	128
• • • • •	• • • • •
255	255

FIG. 9

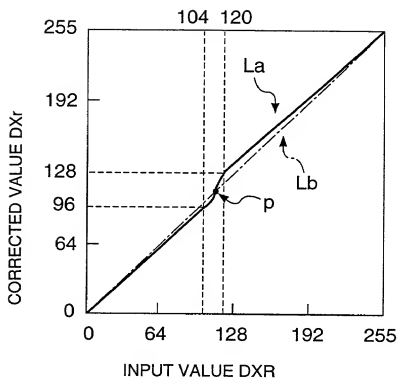


FIG. 10

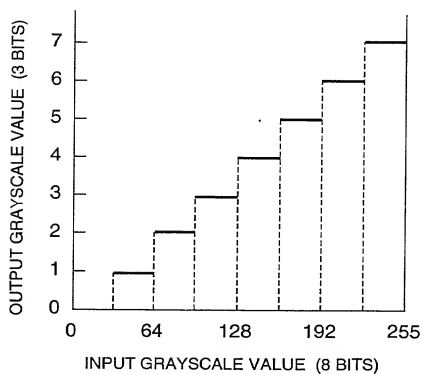


FIG. 11



# HALFTONE PROCESSING ROUTINE

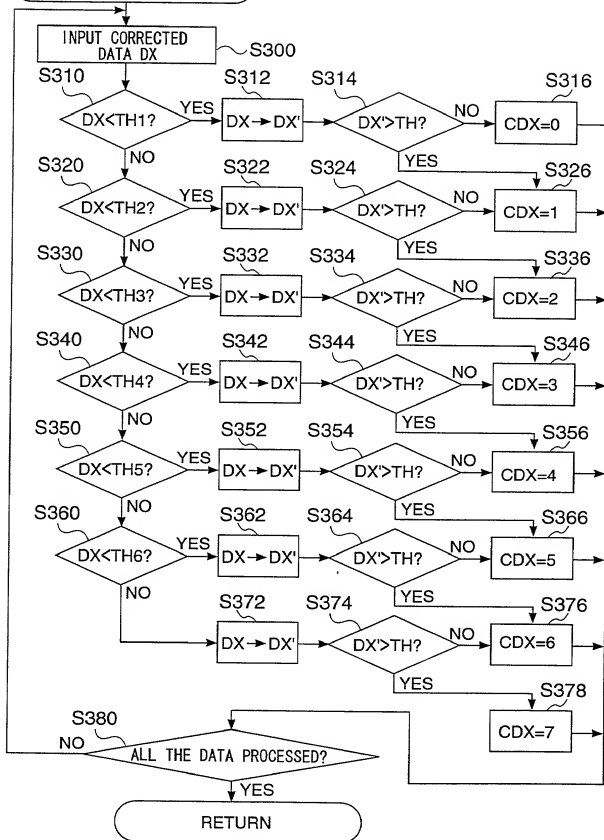


FIG. 12

201402299660

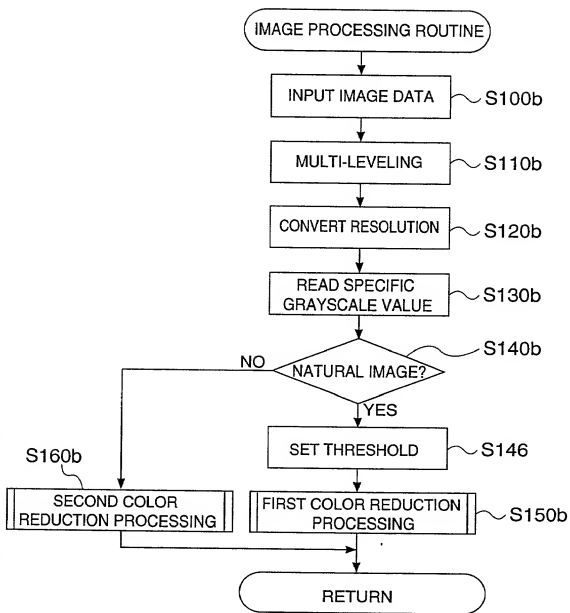


FIG. 13

	(READ)GRAYSCALE VALUE							
	0	1	2	3	4	5	6	7
S310	TH01	TH11	TH1	TH1	TH1	TH1	TH1	TH1
S320	TH2	TH21	TH22	TH2	TH2	TH2	TH2	TH2
S330	TH3	TH3	TH32	TH33	TH3	TH3	TH3	TH3
S340	TH4	TH4	TH4	TH43	TH44	TH4	TH4	TH4
S350	TH5	TH5	TH5	TH5	TH54	TH55	TH5	TH5
S360	TH6	TH6	TH6	TH6	TH6	TH65	TH66	TH67

FIG. 14

Input Grayscale Value (DX)	Output Grayscale Value (CDX)
0 - 31	0
32 - 63	1
64 - 95	2
96 - 127	3
128 - 159	4
160 - 191	5
192 - 223	6
224 - 255	7

FIG. 15

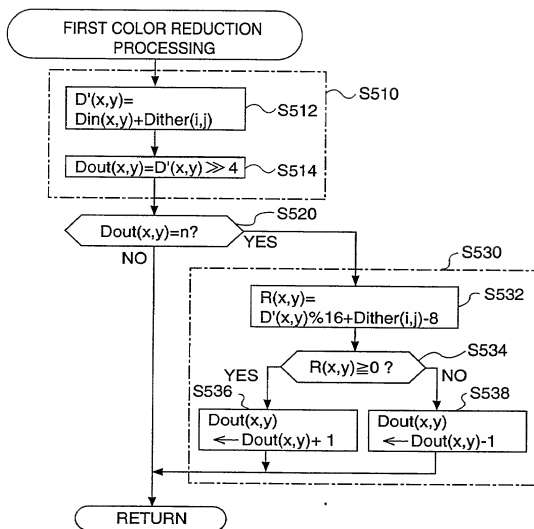


FIG. 16

<DITHER MATRIX:Dither(i,j)>

	0TH COLUMN	FIRST COLUMN	SECOND COLUMN	THIRD COLUMN
0TH LOW	-8	0	-6	+2
FIRST LOW	+4	-4	+6	-2
SECOND LOW	-5	+3	-7	+1
THIRD LOW	+7	-1	+5	-3

(DECIMAL NOTATION)

FIG. 17

AFTER CONVERSION:  $D_{out}(x,y)$

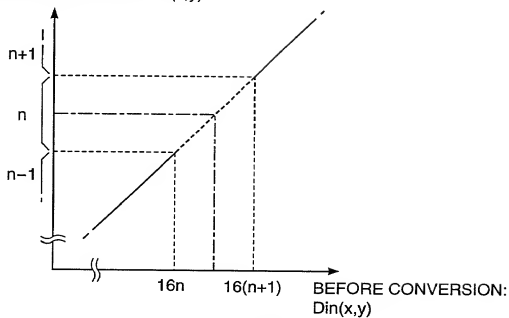


FIG. 18A

AFTER CONVERSION:  $D_{out}(x,y)$

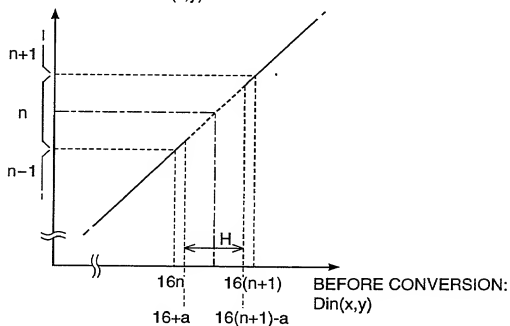


FIG. 18B

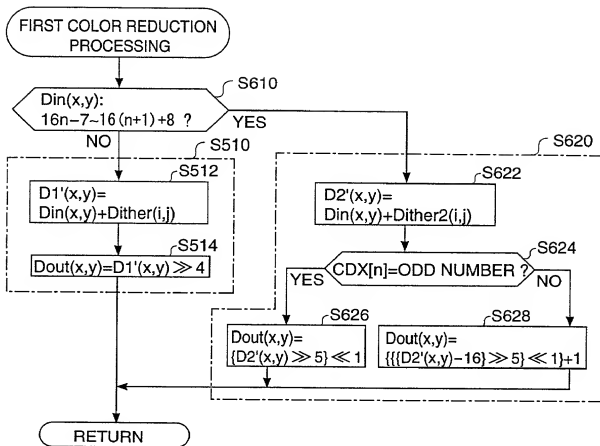


FIG. 19



<DITHER MATRIX:Dither2(i,j)>

	0TH COLUMN	FIRST COLUMN	SECOND COLUMN	THIRD COLUMN
0TH LOW	-8	+8	-4	+12
FIRST LOW	+16	0	+20	+4
SECOND LOW	-2	+14	-6	+10
THIRD LOW	+22	+6	+18	-2

(DECIMAL NOTATION)

FIG. 20

AFTER CONVERSION:  $D_{out}(x,y)$

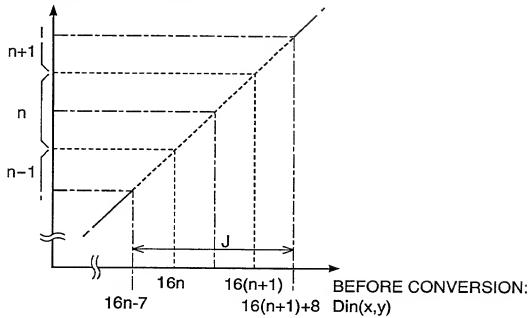


FIG. 21A

AFTER CONVERSION:  $D_{out}(x,y)$

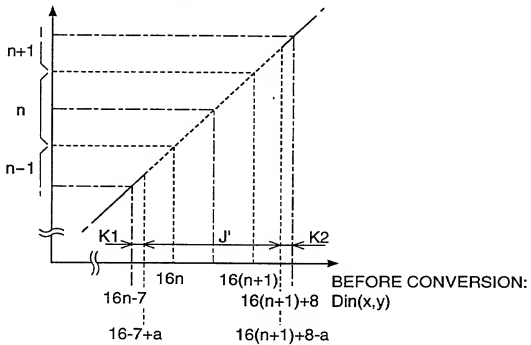


FIG. 21B

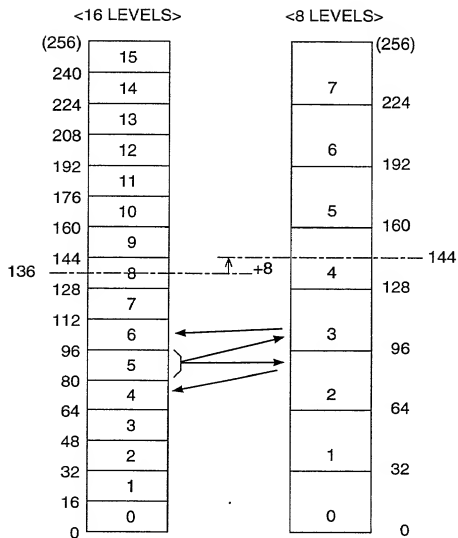


FIG. 22

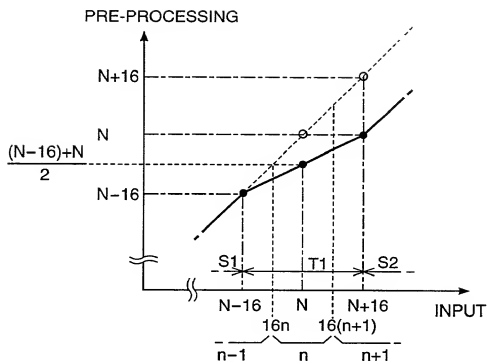


FIG. 23A

INPUT	PRE-PROCESSING	DITHER PROCESSING	POST-PROCESSING
⋮	⋮	⋮	⋮
N-16	N-16	n-1	n-1
⋮	⋮	⋮	⋮
N	$\frac{(N-16)+N}{2}$	n-1, n	n-1, n+1
⋮	⋮	⋮	⋮
N+16	N	n	n+1
⋮	⋮	⋮	⋮

FIG. 23B

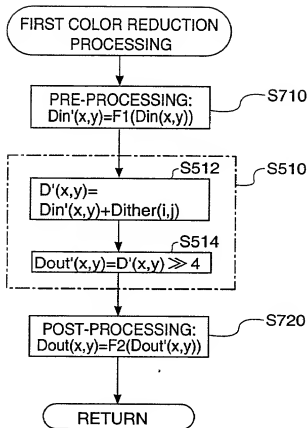


FIG. 24

OUTPUT : Din'(x,y)

<PRE-PROCESSING : LUT>

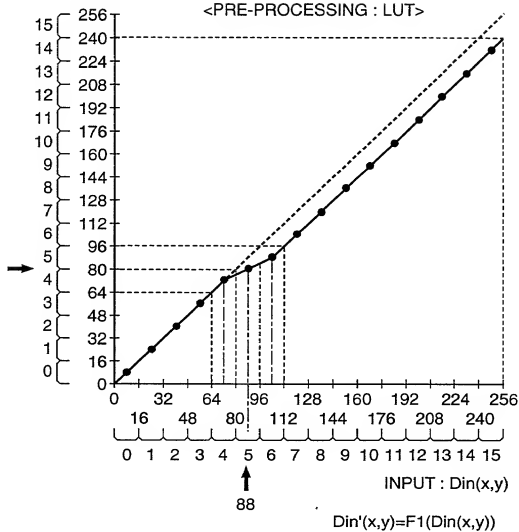


FIG. 25

<POST-PROCESSING : LUT>

INPUT : Dout'(x,y)	OUTPUT : Dout(x,y)
0	0
1	1
2	2
3	3
4	4
5	6
6	7
7	8
8	9
9	10
10	11
11	12
12	13
13	14
14	15
(15)	15



FIG. 26

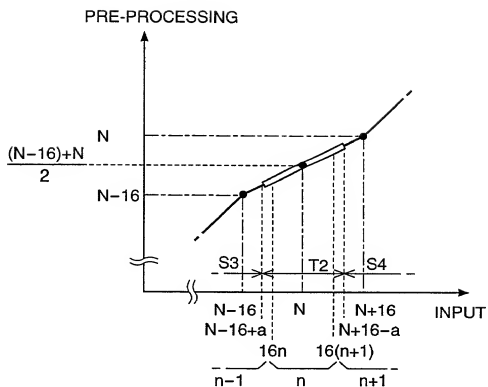


FIG. 27

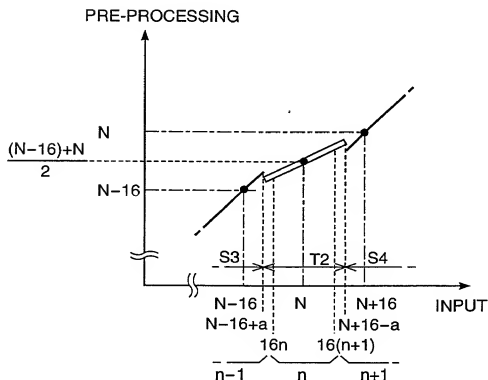


FIG. 28



<POST-PROCESSING : LUT>

INPUT	OUTPUT		
	S3	T2	S4
⋮	⋮	⋮	⋮
n-2	n-2	n-2	n-2
n-1	n-1	n-1	n
n	n	n+1	n+1
n+1	n+2	n+2	n+2
⋮	⋮	⋮	⋮

FIG. 29

09066267.021102

OUTPUT : Din'(x,y)

<PRE-PROCESSING : LUT>

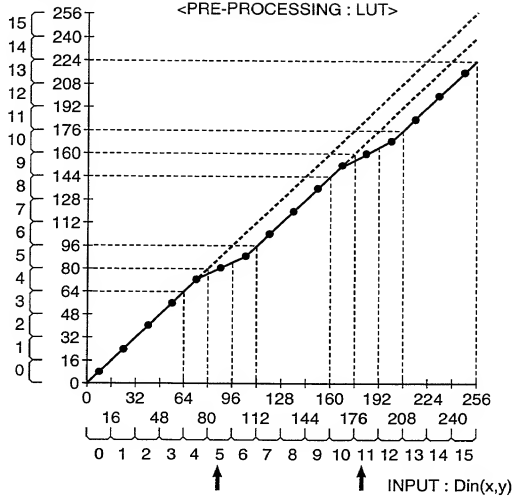


FIG. 30

<POST-PROCESSING : LUT>

INPUT : Dout'(x,y)	OUTPUT : Dout(x,y)
0	0
1	1
2	2
3	3
4	4
5	6
6	7
7	8
8	9
9	10
10	12
11	13
12	14
13	15
(14)	15
(15)	15



FIG. 31